



Claims:

Amend claims 15 - 19 and 21 - 22 as indicated below:

1 (cancelled).

2 (previously amended). The system of claim 17, wherein said drying portions provide substantially complete laterally extending coverage of the sheet, and wherein said first drying portion provides a substantially different range of laterally extending coverage of the sheet than said second drying portion.

3 (cancelled).

4 (previously amended). The system of claim ~~17~~ 2, wherein a quantity of the ink is defined by a spatially varying distribution, and wherein said controller is adapted, based on said distribution, to select one of said first and second plenums to receive more of the pressurized gas than the other of said first and second plenums.

5 (previously amended). The system of claim 17, wherein a quantity of the ink is defined by a spatially varying distribution, and wherein said controller is adapted, based on said distribution, to select one of said first and second plenums to receive more of the pressurized gas than the other of said first and second plenums.

6 (previously amended). The system of claim 17, wherein said first and second plenums are spaced substantially apart from one another in a direction of travel of the sheet by a predetermined distance, wherein said first and second drying portions are each substantially laterally co-extensive, wherein said controller is adapted to select one of said first and second plenums to receive a first predetermined amount of the pressurized gas at a first time, and to select the other of said first and second plenums to receive a second predetermined amount of the pressurized gas at a second time, wherein said second amount of the pressurized gas is predetermined based on said first amount, and wherein the difference between said first time and said second time is substantially equal to said distance divided by the speed of travel of the sheet.

7 (cancelled).

8 (original). A method for drying ink in a high speed printing system, the ink being deposited on a sheet of material traveling in a predetermined direction, the system being coupled to a source of pressurized gas and comprising the steps of:

providing a first plenum disposed so as to extend over the sheet;

providing a second plenum disposed so as to extend over the sheet, wherein said plenums each include an associated plurality of orifices spaced apart from one another so as to define respective drying portions thereof, wherein said plenums are spaced substantially apart from one another in the direction of

travel of the sheet a predetermined distance, and wherein the drying portions of said plenums are each substantially laterally co-extensive;

selecting one of said two plenums to receive a first predetermined amount of the pressurized gas at a first time; and

selecting the other of said two plenums to receive a second predetermined amount of the pressurized gas at a second time, wherein said second amount of the pressurized gas is predetermined based on said first amount, and wherein the difference between said first time and said second time is substantially equal to said distance divided by the speed of travel of the sheet.

9 (cancelled).

10 (cancelled).

11 (cancelled).

12 (cancelled).

13 (cancelled).

14 (cancelled).

15 (amended). An ink drying system for high speed printing on a traveling sheet of material, the system being coupled to a source of pressurized gas and comprising:

a first plenum disposed so as to extend over the sheet and define a first drying portion of said first plenum for directing the gas through said first plenum onto the sheet;

~~an electrically controlled~~ a first fluid flow valve for varying the flow rate of the gas through said first plenum; and

a controller for ~~electrically~~ receiving first information ~~about the amount of ink to be dried by~~ for determining the drying energy required of said first drying portion and ~~electrically~~ automatically controlling said first fluid flow valve in response to said first information, for drying ink deposited on the sheet.

16 (amended). The ink drying system of claim 15, wherein said controller is adapted to control said first fluid valve in response to changes in the ~~amount of ink to be dried in drying energy required of said first drying portion for drying~~ different lines of printing.

17 (amended). The ink drying system of claim 15, further comprising at least a second plenum disposed so as to extend over the sheet and define a second drying portion of said second plenum for directing the gas through said second plenum onto the sheet, ~~an electrically controlled~~ a second fluid flow valve for varying the flow rate of the gas through said second plenum, wherein said controller is adapted to receive second information ~~about the amount of ink to be dried by~~ for determining the drying energy required of said second drying portion and to ~~electrically~~

automatically control said second fluid flow valve in response to said second information, for drying ink deposited on the sheet

18 (amended). A method for high speed printing on a traveling sheet of material, comprising the steps of:

providing a first plenum disposed so as to extend over the sheet and define a first drying portion of said first plenum for directing gas from a pressurized source of gas through said first plenum onto the sheet;

~~electrically receiving first information about the amount of ink to be dried by for determining the drying energy required of said first drying portion; and~~

~~electrically automatically controlling the flow rate of the gas through said first plenum in response to said first information, for drying ink deposited on the sheet.~~

19 (amended). The method of claim 18, further comprising providing at least a second plenum disposed so as to extend over the sheet and define a second drying portion of said second plenum for directing the gas through said second plenum onto the sheet, receiving second information for determining the drying energy required of said second drying portion, and electrically

automatically controlling the flow rate of the gas through said second plenum in response to said second information, for drying ink deposited on the sheet.

20 (previously added). The method of claim 19, wherein said drying portions provide substantially complete laterally extending coverage of the sheet, and wherein said first drying portion provides a substantially different range of laterally extending coverage of the sheet than said second drying portion.

21 (amended). The method of claim ~~19~~ 20, wherein a quantity of the ink is defined by a spatially varying distribution, and wherein said controlling, based on said distribution, comprises selecting one of said first and second plenums to receive more of the pressurized gas than the other of said first and second plenums.

22 (amended). The ~~system~~ method of claim 19, wherein a quantity of the ink is defined by a spatially varying distribution, and wherein said controlling comprises selecting, based on said distribution, one of said first and second plenums to receive more of the pressurized gas than the other of said first and second plenums.

23 (previously added). The method of claim 19, wherein said first and second plenums are spaced substantially apart from one another in a direction of travel of the sheet by a predetermined distance, and wherein said first and second drying portions are each substantially laterally co-extensive, wherein said controlling comprises selecting one of said first and second

plenums to receive a first predetermined amount of the pressurized gas at a first time, and selecting the other of said first and second plenums to receive a second predetermined amount of the pressurized gas at a second time, wherein said second amount of the pressurized gas is predetermined based on said first amount, and wherein the difference between said first time and said second time is substantially equal to said distance divided by the speed of travel of the sheet.

24 (previously added). The method of claim 18, further comprising controlling said first fluid valve in response to changes in the drying energy required of said first drying portion for drying different lines of printing.

25 (previously added). The ink drying system of claim 15, further comprising at least one ink jet printhead for depositing the ink, wherein said first information includes the amount of ink deposited by said at least one ink jet printhead.

26 (previously added). The ink drying system of claim 4, further comprising a plurality of ink jet printheads for depositing the ink, wherein said first information includes the amount of ink deposited by one of said plurality of ink jet printheads and wherein said second information includes the amount of ink deposited by another of said plurality of ink jet printheads.

27 (previously added). The method of claim 18, further comprising providing at least one ink jet printhead for depositing the ink, wherein said first information includes the amount of ink deposited by said at least one ink jet printhead.

28 (previously added). The method of claim 21, further comprising providing a plurality of ink jet printheads for depositing the ink, wherein said first information includes the amount of ink deposited by one of said plurality of ink jet printheads and wherein said second information includes the amount of ink deposited by another of said plurality of ink jet printheads.